REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action dated January 26, 2007, and the interview of March 22, 2007, where amendments to the claims were discussed. The status of the application is as follows:

- Claims 1-35 are currently pending in the subject application and are presently under consideration. Claims 14, 32, and 33 have been cancelled herein, and claims 11 and 31 have been amended to incorporate elements of these cancelled claims, respectively. Additionally, claims 15-21 and claims 34-35 have been amended to update their dependencies. Moreover, claims 1, 5, 9, 22-26, and 28 have also been amended herein.

- Claims 1-10 and 25 stand objected to due to minor informalities.

- Claims 23-26 stand rejected under 35 U .S.C. §101 as being directed towards non-statutory subject matter.

- Claims 1-7, 9, 10, and 22-29 stand rejected under 35 U.S.C. §102(b) as being anticipated by Zenchelsky, *et al.* (US 6,173,364).

- Claims 11-13 and 31-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Hughes, *et al.* (US 5,842,040).

- Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zenchelsky, *et al.* in view of Hughes, *et al.*

- Claims 14-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of "Guide to IP Layer Network Administration with Linux – Routing Cache", hereinafter referred to as "Guide".

- Claims 16-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of Guide and further in view of Bass, *et al.* (US 6,460,120).

- Claim 30 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zenchelsky, *et al.* in view of Lubkin, *et al.* (US 5,339,435).

- Claims 33-35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of "TCP Protocol Specification", hereinafter referred to as "TCP".

The Objection to Claims 1-10 and 25

Claims 1-10 and 25 stand objected to due to minor informalities. Claims 1, 5, 9, and 25 have been amended pursuant to a discussion with the Examiner on March 22, 2007. Accordingly, withdrawal of this objection is respectfully requested.

The Rejection of Claims 23-26 Under 35 U.S.C. §101

Claims 23-26 stand rejected under 35 U.S.C. §101 as being directed towards non-statutory subject matter. In view of the amendments made to these claims, withdrawal of this rejection is respectfully requested.

The Rejection of Claims 1-7, 9, 10, and 22-29 Under 35 U.S.C. §102(b)

Claims 1-7, 9, 10, and 22-29 stand rejected under 35 U.S.C. §102(b) as being anticipated by Zenchelsky, *et al.* Withdrawal of this rejection is respectfully requested, as Zenchelsky, *et al.* fails to disclose each and every aspect of these claims as amended.

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claims 1, 5, 22, and 23

Claim 1 requires, *inter alia, correlating the characteristics selected from said received packet with the predefined characteristics; and using results from the*

correlating step to perform Layer 3 or higher classification of the received packet.
Claims 5, 22, and 23 recite similar aspects. Zenchelsky, *et al.* fails to disclose each and every element recited in these claims.

Zenchelsky, *et al.* is directed towards a cache used with a network filter, wherein the cache receives, stores, and ejects local rule bases dynamically.[1] When the network filter receives a packet, the cache is searched for a rule applicable to the received packet.[2] If no rule exists in the cache, an appropriate local rule base is located and an applicable filter rule is carried out and copied to the cache along with a rule base indicator and version number.[3] The filter rule used by the network filter is described as causing a packet to be passed through the filter or dropped, such that it does not reach its intended destination.[4]

Zenchelsky, *et al.,* however, is devoid of a disclosure of *using results from the correlating step to perform Layer 3 or higher classification of the received packet* as claimed. Packet classification is a term of art, and is not disclosed in Zenchelsky, *et al.* For example, the specification briefly describes packet classification tasks with respect to Layers 2, 3, and 4 of the OSI model of network architecture. As Zenchelsky, *et al.* fails to disclose each and every element recited in these claims, withdrawal of the rejection of these claims is respectfully requested.

Claims 2-4, 6, 7, 9, 10, and 24-29

These claims, which respectively depend from claims 1, 5, 22, and 23, are believed to be allowable at least by virtue of their dependency from their respective base claims.

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[1] Zenchelsky, *et al.,* Abstract
[2] Zenchelsky, *et al.,* Abstract
[3] Zenchelsky, *et al.,* Abstract
[4] Zenchelsky, *et al.,* col. 1, line 65 – col. 2, line 4

The Rejection of Claims 11-13 and 31-32 Under 35 U.S.C. §102(b)

Claims 11-13 and 31-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Hughes, *et al.* Withdrawal of this rejection is respectfully requested, as claim 11 has been amended to include elements of cancelled claim 14, and claim 31 has been amended to include elements of cancelled claims 32 and 33.

Claim 11

As discussed above, claim 11 has been amended to include elements of cancelled claim 14, which stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of Guide. Amended claim 14 is not made obvious over Hughes, *et al.* and Guide, as Hughes, *et al.* and Guide fail to teach or suggest each and every element recited in this claim.

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) *must teach or suggest all the claim limitations.* (Emphasis added). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 11 as amended requires, *inter alia,* a second data structure that includes an aging algorithm for aging the cache, the aging algorithm initializes an expiration timer, decrements the expiration timer by a check time interval that is less than a current value of the expiration timer, reviews a Layer 3 or Layer 4 database for a change to the Layer 3

or Layer 4 database, and purges the cache if a change has been made during the check time interval.

Hughes, *et al.* is directed towards a policy caching method for use in a communication device.[5] Hughes, *et al.* teaches that policies can be enforced at high data throughput rates by analyzing one protocol data unit (PDU) from a group of related PDUs to determine a network policy for the PDU, caching the relevant portion of the policy, and applying the cached policy to the other related PDUs without requiring a complete analysis of other related PDUs.[6] Guide discloses a routing cache that stores recently used routing entries in a hash lookup table, which is consulted prior to accessing routing tables.[7] There is no disclosure in Guide of *a data structure for a full packet search* as required by claim 11. Additionally, Guide fails to disclose the aging algorithm recited in amended claim 11. Accordingly, since the combination of Hughes, *et al.* and Guide fails to teach or suggest each and every element as claimed, the combination of Hughes, *et al.* and Guide fails to render obvious the subject claim.

Claim 31

Claim 31 has been amended to include elements of cancelled claims 32 and 33. Claim 33 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of TCP. Amended claim 31 is not obvious over Hughes, *et al.* in view of TCP, as these references fail to disclose each and every element recited in this claim.

Claim 31 as amended requires *wherein the determining act further includes the acts of: examining control bits in the TCP header; if selected ones of said control bits are set to a first state, examining a length field in the IP header to determine its value:*

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[5] Hughes, *et al.*, Abstract
[6] Hughes, *et al.*, column 2, lines 43-49
[7] Guide, Chapter 4.7, page 1

multiplying a value in the data offset field in the TCP header by 4; and subtracting the result of the multiplication from the value in the length field.

As described above, Hughes, *et al.* teaches that policies can be enforced at high data throughput rates by analyzing one protocol data unit (PDU) from a group of related PDUs to determine a network policy for the PDU, caching the relevant portion of the policy, and applying the cached policy to the other related PDUs without requiring a complete analysis of other related PDUs.[8] To initially locate a policy, Hughes, *et al.* teaches filtering for the policy based upon one or more of network protocol, source address, security options, transport protocol, Syn, Fin flags, source port, destination port, or a combination of two or more of these fields.[9] Hughes, *et al.,* however, is silent with regard to *examining a length field in the IP header to determine its value if selected ones of said control bits are set to a first state,* much less performing the additional mathematical operations required by the claims.

TCP is also silent with respect to such operations. Rather, TCP discloses contents of an Internet Protocol header, such as a source port, destination port, sequence number, acknowledgment number, data offset, control bits, window, checksum, urgent pointer, options, and others. The Examiner asserts that it would have been obvious to modify Hughes, *et al.* with finding the data starting location as taught by TCP to correctly find the location of the data.[10] There is no teaching or suggestion in TCP, however, relating to finding location of data, much less performing the operations of *if selected ones of said control bits are set to a first state, examining a length field in the IP header to determine its value; multiplying a value in the data offset field in the TCP header by 4; and subtracting the result of the multiplication from the value in the length field* as required by this claim. Therefore, since Hughes, *et al.* and TCP, alone or in combination, fail to

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[8] Hughes, *et al.,* column 2, lines 43-49
[9] Hughes, *et al.,* column 5, lines 33-47
[10] Office Action dated February 28, 2007, page 15

teach or suggest each and every element recited in claim 31, such claim is not obvious over the combination of Hughes, *et al.* and TCP.

The Rejection of Claim 8 Under 35 U.S.C. §103(a)

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zenchelsky, *et al.* in view of Hughes, *et al.* Claim 8 is believed to be allowable at least by virtue of its dependency from independent claim 5.

The Rejection of Claims 14 and 15 Under 35 U.S.C. §103(a)

Claims 14 and 15 stand rejected under 35 U.S.C. §103(a) over Hughes, *et al.* in view of Guide. As noted above, claim 14 has been cancelled and elements thereof have been incorporated into independent claim 11. Additionally, claim 15 is believed to be allowable at least by virtue of its dependency from claim 11. Accordingly, withdrawal of this rejection is respectfully requested.

The Rejection of Claims 16-21 Under 35 U.S.C. §103(a)

Claims 16-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hughes, *et al.* in view of Guide, and further in view of Bass, *et al.* Claims 16-21 are believed to be allowable at least by virtue of their dependency from claim 11.

The Rejection of Claim 30 Under 35 U.S.C. §103(a)

Claim 30 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zenchelsky, *et al.* in view of Lubkin, *et al.* This rejection should be withdrawn. as claim 30 is believed to be allowable at least by virtue of its dependency from claim 22.

The Rejection of Claims 33-35 Under 35 U.S.C. §103(a)

Claims 33-35 stand rejected under 35 U.S.C. §103(a) as being obvious over Hughes, *et al.* in view of TCP. As noted above, claim 33 has been cancelled and

elements thereof have been incorporated into independent claim 31. Claims 34 and 35
are believed to be allowable at least by virtue of their dependency from claim 31.
Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

  In view of the foregoing, it is submitted that claims 1-13, 15-31, 34, and 35
distinguish patentably and non-obviously over the prior art of record. An early indication
of allowability is earnestly solicited.

         Respectfully submitted,
         DRIGGS, HOGG & FRY CO., L.P.A.
         CUSTOMER NO. 25299

         Michael J. Medley Reg. No. 57,058